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Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

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In the Matter of)
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Amendment of the Commission's)
Rules to Establish New Personal)
Communications Services)
)

GEN Docket No. 90-314

FEDERAL COMMUNICATIONS
COMMISSION
OFFICE OF THE
SECRETARY

DEC 28 '93

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**OPPOSITION OF SPECTRALINK CORPORATION
TO PETITIONS FOR RECONSIDERATION**

SpectraLink Corporation ("SpectraLink"), by its undersigned counsel and pursuant to Section 1.429(f) of the Commission's Rules, 47 C.F.R. § 1.429(f) (1993), hereby opposes certain aspects of the petitions for reconsideration ("Petitions") of the Commission's Second Report and Order in the above-captioned proceeding^{1/} filed by Rockwell International Corporation ("Rockwell"), Telocator -- the Personal Communications Industry Association ("Telocator"), Northern Telecom, Inc. ("Northern"), and Apple Computer, Inc. ("Apple") addressing various unlicensed personal communications services ("U-PCS") technical issues. SpectraLink specifically opposes:

- Rockwell and Telocator's proposal to increase the Listen-Before-Talk ("LBT") monitoring interval from 10 to 20 milliseconds;
- Northern Telecom's proposal to exempt devices that cannot meet the specifications of the etiquette; and
- Apple's proposal to "conditionally" authorize U-PCS devices prior to UTAM's verification of compliance with the U-PCS spectrum etiquette.

^{1/} *Second Report and Order*, GEN Docket 90-314 (released September 23, 1993)

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SpectraLink believes strongly that these proposals are contrary to the public interest and would respectively compromise the quality of U-PCS, undermine the validity of the U-PCS spectrum etiquette, and complicate UTAM's task of ensuring compliance with the U-PCS spectrum etiquette. Accordingly, SpectraLink urges the Commission to deny these Petitions with respect to these specific proposals.

**I. THE LISTEN-BEFORE-TALK MONITORING INTERVAL
SHOULD NOT BE INCREASED FROM 10 TO 20 MILLISECONDS**

Rockwell and Telocator both propose that the Commission modify Sections 15.321(c)(1), (c)(5), (c)(6) and (e) of the Rules to increase the LBT listening period from 10 to 20 milliseconds and the corresponding frame time to 20 milliseconds.^{2/} Rockwell and Telocator argue that because the 20 millisecond timeframe modification is a multiple of 10 milliseconds, the increase to 20 milliseconds will permit a greater range of technologies to use the U-PCS band without causing time/spectrum collisions or adversely affecting channel set-up time.^{3/}

Contrary to Rockwell and Telocator's assertions, SpectraLink believes that an increase of the LBT monitoring interval from 10 to 20 milliseconds would likely have a significant adverse impact on channel set-up time. In SpectraLink's informed opinion, a 10-millisecond increase in the LBT monitoring interval, coupled with the U-PCS spectrum etiquette requirement that U-PCS devices scan all available channels to locate and access a channel that is 30 dB or less above thermal noise, would likely delay channel set-up time by one to

^{2/} See Petition for Reconsideration of Rockwell at 5; Petition for Reconsideration of Telocator at 19-20.

^{3/} *Id.*

two seconds. Although 10 milliseconds does not appear to be significant, when aggregated by a device scanning for example, 100 channels, the additional 10 milliseconds of monitoring accrues to a full one-second delay for channel set-up. As a matter of customer expectation and service quality, SpectraLink submits that a one-second delay for a dial tone is simply unacceptable. Such delays would not be uncommon in densely populated environments where numerous calls would be initiated simultaneously.

Spectralink recognizes that in less densely populated environments a 20-millisecond listening period will not likely delay channel set-up times because more channels will be available, thereby reducing the amount of scanning necessary to access a channel. Accordingly, if the Commission finds merit in Rockwell and Telocator's request to increase the LBT listening period, the Commission should establish an LBT monitoring range that would require U-PCS devices to listen for a minimum of 10 milliseconds up to a maximum of 20 milliseconds. This approach would enable the U-PCS band to accommodate different technologies without adversely affecting channel set-up time in densely populated environments.

II. NORTHERN TELECOM'S PROPOSAL TO ALLOW THE OPERATION OF MULTICARRIER/SHARED ANTENNA DEVICES IN THE U-PCS BAND MUST BE REJECTED

Northern Telecom's proposal to allow multicarrier/shared antenna devices to operate in the U-PCS band^{4/} must be rejected to preserve the integrity of the U-PCS spectrum etiquette. As detailed in Northern's Petition, under the U-PCS spectrum etiquette, the emissions of the active transmitter will block the reception of a receiver connected to a

^{4/} See Petition for Reconsideration of Northern Telecom at A-5.

shared antenna attempting to scan for a free channel. Northern argues that its proposal would allow a multicarrier time division duplex (TDD) device to scan and access other channels during its receive interval even if that multicarrier device already has a transmitter active on one or more channels. In other words, a U-PCS device would transmit without prior monitoring for other transmissions during its intended transmit interval.

This provision was originally included in the WINForum etiquette and was properly before the Commission prior to adoption of the U-PCS technical Rules. The Commission correctly decided not to adopt this provision of the WINForum etiquette because it inherently undermines the LBT concept. The Commission recognized that the consequence of adopting the multicarrier/shared antenna rule proposed by Northern would be to arbitrarily exempt certain devices from complying with the etiquette simply because they cannot comply.

SpectraLink submits that adoption of a rule that would so totally violate the fundamental concept of the U-PCS spectrum etiquette would only be the beginning of a slippery slope. The Commission must make every effort to preserve the integrity and establish the validity of the U-PCS spectrum etiquette. The Commission must begin here by denying Northern's request.

III. APPLE'S PROPOSAL TO CONDITIONALLY AUTHORIZE U-PCS DEVICES PRIOR TO UTAM'S VERIFICATION OF COMPLIANCE WITH THE U-PCS SPECTRUM ETIQUETTE IS CONTRARY TO THE PUBLIC INTEREST

Although well intentioned, Apple's proposal that the Commission "create a process for conditional licensing of U-PCS devices" is contrary to the public interest of ensuring the orderly deployment of U-PCS devices.^{5/} Contrary to Apple's view that such a process

^{5/} See Petition for Reconsideration of Apple at 9.

would enable the Commission to resolve many of the uncertainties that appropriately remain in the Rules governing U-PCS devices,^{6/} SpectraLink submits that such a procedure would invite unauthorized and premature deployment of systems as manufacturers race to meet customer demand. Moreover, such a procedure would complicate UTAM's task of ensuring compliance with the U-PCS spectrum etiquette by requiring not only that UTAM process the rush of applications likely to be submitted upon its establishment as a functioning entity, but also examine conditionally authorized devices for compliance with the U-PCS spectrum etiquette. Accordingly, SpectraLink urges the Commission to decline Apple's well-intentioned invitation to establish a dual track for licensing U-PCS devices.

IV. CONCLUSION

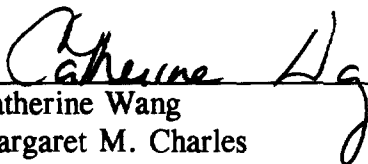
For the foregoing reasons, SpectraLink urges the Commission to deny the Petitions to the extent that (1) Rockwell and Telocator propose to increase the Listen-Before-Talk ("LBT") threshold from 10 to 20 milliseconds; (2) Northern Telecom proposes to exempt

^{6/} *Id.*

devices that cannot meet the specifications of the etiquette; and (3) Apple proposes to "conditionally" authorize U-PCS devices prior to UTAM's verification of compliance with the U-PCS spectrum etiquette.

Respectfully submitted,

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CERTIFICATE OF SERVICE

I hereby certify that on this 28th day of December 1993, copies of the Opposition of SpectraLink Corporation to Petitions for Reconsideration, GEN Docket No. 90-314, were served by first-class mail, postage prepaid on the following:

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